DOCUMENT RESUME

ED 305 827 FL 017 951

AUTHOR Patkowski, Mark S.
TITLE Predictors of College Success beyond ESL.
PUB DATE Mar 89
NOTE 31p.; Paper presented at the Annual Conference on the Teaching of English to Speakers of Other Languages (23rd, San Antonio, TX, March 7-11, 1989).
PUB TYPE Reports - Evaluative/Feasibility (142) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; College Second Language Programs; *English (Second Language); Higher Education; Language Attitudes; Longitudinal Studies; *Predictor Variables; Program Effectiveness; Questionnaires; Second Language Learning; *Student Attitudes; Withdrawal (Education)
IDENTIFIERS City University of New York Brooklyn College; *Project SEEK

ABSTRACT

A longitudinal study assessed the progress of 271 students of English as a Second Language (ESL) who had entered Project SEEK at Brooklyn College (New York) in the fall of 1985. The goals of the study were to identify factors predicting success or failure in academic courses, and to study attitudes of the students toward their second language and toward their college learning experience. Data were collected from: (1) academic records, including standardized test scores, a college entrance grade index, and college grades and credits; and (2) responses to a questionnaire concerning personal characteristics, language use patterns, and perceptions of belonging to the college community. Analysis of the results indicates that a variety of cognitive-academic, linguistic, and attitudinal factors influence the success of ESL college students. The more successful students did not repeat courses as often and progressed faster into mainstream English courses. Many students did not do well in writing, and a need for early intervention for students at risk of repeating is discussed. Efforts to enhance student feelings of belonging are also suggested. The area least susceptible to intervention seems to be language use patterns because those students who used more English were less successful in college. Further research is recommended. The response questionnaire is appended. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED305827

Paper presented at the Annual Conference on the Teaching of English to Speakers of Other Languages (23rd, San Antonio, TX, March 7-11, 1989).

Mark S. Patkowski

Assistant Professor

Department of Educational Services (ESL)

Brooklyn College

Predictors of College Success Beyond ESL

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

PATKOWSKI, M.

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

A SEEK-Funded Retention Research Project

FL017951

BEST COPY AVAILABLE

Mark S. Patkowski

Predictors of College Success Beyond ESL

INTRODUCTION

This study assessed the progress, after 3 years, of the 271 ESL students who entered the Brooklyn College ESL program in the fall semester of 1985. The main purposes of the study were to identify factors which predict success or failure in academic courses, and to study the attitudes of ESL students towards using their second language and towards their learning experience in college. It was hoped that findings might prove useful in the development of recommendations for strategies to improve the retention and academic performance of ESL students.

Importance of the Problem and Review of the Literature

The issue of whether some of the gains in widening access to post-secondary education are being eroded is one which has come to the fore in recent years. A number of conferences have examined this problem (e.g., the 1987 CUNY ESL Council Conference on "Improving the Odds", or the 1987 Hispanic Association Conference in Princeton on "Barriers to Retention"), and research into the factors surrounding retention has received renewed emphasis. Unfortunately, few studies have focused on language-minority students in general or on students enrolled in ESL programs in particular, as can be seen in a recent report based

on consultations with more than 375 colleges (Noel et al., 1985).

However, an earlier SEEK-funded retention study at Hunter College (Smoke, 1987) did focus on ESL students and found that both the number of times students repeated ESL writing courses and the number of semesters that elapsed between the completion of ESL writing and the taking of freshman composition seemed related to success in freshman composition. Indeed, it was found that of the 198 students examined, none who had taken upper-level ESL writing courses more than three times had passed freshman composition. Patterns of language use also correlated with success in freshman composition (respondents who used more English on the job or who had at least one friend with whom to speak English had better passing rates). On the other hand, none of the demographic variables examined (age at arrival in the US, sex, first language, length of US residence) significantly affected success in freshman composition. One goal of this study was to determine whether ESL students at Brooklyn College would show the same characteristics as those studied at Hunter.

This study did not only seek to replicate the Smoke findings, but also to expand the number of variables included. Two sets of variables in particular were added: (1) students' "sense of belonging" to the college community, (as measured by a questionnaire), and (2) students' entering scores both on the CAA (College Admissions Average - an index based on grades in academic courses reported by students' high schools), and on the math, reading (CRAT), and writing (WAT) basic skills tests.

"Sense of belonging" was included as a variable because

research (e.g., as reported at the 1987 CUNY ESL Council Conference by Michael Brookes during the plenary panel) has shown that "creating a sense of community and of belonging" improves student success. In fact, the notion that the learner's "social integration" within the institution is associated with persistence is not a new one. For example, Tinto (1975) proposed that social integration, which "occurs primarily through informal peer group associations, semi-formal extracurricular activities, and interaction with faculty and administrative personnel" (p.107) is a primary factor in drop-out decisions. The relevance of such notions to the situation of ESL students seems clear.

The various entering scores were included as a second set of variables because research has shown that scores on writing placement tests (e.g., McGuire, 1986) or other test scores (e.g., on the SAT, Herndon, 1984) do discriminate between persisters and non persisters for the general student population. In addition, the stated purpose of the Basic Skills Tests is to assess student readiness in reading, writing, and math before undergoing college-level work (the math test has the added interest that, as the least "language-dependent" of the three, it may come closest to providing a measure of the "cognitive-academic" abilities of second-language students); similarly, the CAA score plays an important role in admissions decisions and is seen both as a measure of previous and future academic achievement. Inclusion of these scores, it was hoped, would yield insights into whether they can in fact adequately predict the future academic

performance of ESL students.

Finally, it was hoped that an approach which examined both CRAT, WAT, Math and CAA scores on the one hand and the results of a questionnaire designed to assess certain attitudinal and sociolinguistic variables on the other would contribute to the identification of some of the characteristics of successful ESL "persisters;" since the identification of student categories has been described as the first step in developing a framework for student retention (Ferguson et al, 1986), and since a basic goal of retention is to move as many students as possible into the persister category, it was hoped that this study could yield some results with implications for intervention and support programs in dealing with college-level ESL students.

METHOD

Data Collection

Two types of information were collected:

(1) Academic transcripts, CAA and Basic Skills Test scores were obtained from the Registrar, Admissions Office and Testing Office at Brooklyn College. (Sincere thanks are owed to Mrs. Thomson, Mr. Iantosca, and Mr. Weg their helpful and efficient cooperation.)

"Success" for the students was measured based on a set of 6 criteria. "Successful" students had to meet the first two; in addition, they also had to meet three of the remaining four. The criteria were as follows:

(a) ESL courses completed, all basic skills tests passed

(b) GPA = 2.0 or better

(c) English 1 (Freshman Composition) passed

(d) at least 6 credits earned in Core courses with C or better

(e) at least 50 credits earned

(f) a completion ratio of attempted credits of at least 70%

Since this study investigated the performance of students at the end of their third year in college, graduation (which is usually selected) could obviously not be employed as a measure of "success." Furthermore, recognition has been given to the fact that graduation is only one type of retention" (Lenning, 1980) and that even though there is little research which examines retention in terms of course completion, "this void is regrettable since course-completion rates can impact institutional resources, policies on refunds, grading, and definitions of normal progress much more strongly than graduation rates" (pp.10-11).

(2) A questionnaire designed to obtain information concerning (a) autobiographical data (sex, first language, age at arrival, length of residence), (b) self-assessment of patterns of language use on the job and with friends, and (c) perception of "belonging to the college." The questionnaire incorporated questions used by Smoke (for (a) and (b) above) and also included a set of items developed by this researcher (for (c) above).

The new questionnaire was developed as follows. A set of

four questions (written short-answer format) was administered to 29 ESL students. The students were asked what aspects of their college experience made them feel positive and comfortable, what aspects discouraged them and made them feel uncomfortable, what would be the main thing they would tell a friend about the college, and in what ways they felt their experience differed from other students' because of their ESL background.

The responses were then coded and tabulated. The majority of responses seemed to fall within those categories which are generally recognized as significant in affecting student retention (i.e. factors relating to academic and social involvement, and to involvement with faculty and other staff. However, three particular factors did emerge: (1) the perception that the basic skills tests in reading, writing and math are unfair obstacles; (2) the perception that Core requirements at Brooklyn are burdensome and unnecessary (3) the perception that ESL acts as both an academic obstacle, keeping students from "real" courses, and as a social obstacle, isolating ESL students from others and making them appear inferior in the eyes of others.

Based on these responses, a set of 7 items was constructed. These were supplemented with four more based on existing retention questionnaires (e.g., Donovan, 1983; Cope and Hannah, 1975; Beal and Noel, 1980) in order to cover all the generally recognized factors as mentioned above. The items consisted of statements, some phrased positively and some phrased negatively, to which students responded on a 5 point "agree-disagree" scale.

Responses to negatively worded items were reversed so that for all items the highest response code was indicative of a positive rating. (A sample of the questionnaire is presented in the Appendix.)

Population

The study took a cohort approach; the sample consisted of all ESL students (both SEEK and non-SEEK) who entered the Brooklyn College program in the Fall 1985 semester. There were 271 such students, and their transcripts were examined at the end of the Spring 1988 semester, or after 3 years of college study.

Since Brooklyn College automatically bars students who have not passed their basic skills tests (WAT and CRAT) by the time they have reached 64 credits from taking courses other than basic skills, and since most ESL students take over three years to reach that number of credits, it was felt that the selection of the entering class of 1985 optimized the chances of obtaining a sample of ESL students who varied widely in their abilities and who were enrolled in a broad mix of regular college courses. The selection of an earlier cohort might have resulted in an excessive attrition rate for less academically proficient students thus narrowing the sample range; conversely, the selection of a later cohort might not have provided sufficient time for more proficient students to establish enough of a track record in post-ESL college courses.

RESULTS: DESCRIPTIVE STATISTICS

Description of the Sample:(a) the Fall 1985 Cohort (n=271)

Two-hundred and seventy-one students entered the ESL program at Brooklyn College in the Fall semester of 1985. Ninety-three (34.3%) were admitted under the SEEK program; of the remaining 178 students, 27 (10.0%) came from foreign high schools or colleges, and 19 (7.0%) came from out of New York State. In all, 30 entrants received some transfer credit; 16 of these were from foreign educational backgrounds, and most of the remaining 14 had transferred from colleges in the New York metropolitan area.

Entering scores on the basic skills tests were highest in math, with 167 (63.5%) of the students receiving a passing score of 25/40 or better. Only 57 (21.7%) students entered with passing scores on the reading test (29/40, form 3 of the DTLS), and just two students entered with a passing writing score. The average CAA score was 798/950, indicating that the gpa of academic courses taken in high school by the entering students was almost exactly halfway between a B and a C (B=850 and C=750 on the CAA). Figures 1(a) and (b) below illustrate the distribution of scores for the entering ESL class of 1985. (Note: sample size often is under 271 because complete information on all the variables was not available for all the students).

Entering Scores (passing score)	MATH (25/40)	READING (29/40)	CAA
N	263	263	199
min	3	1	629
max	40	39	950
mean	27.4	20.9	798
s.d.	8.6	8.3	71.8

Figure 1(a): Descriptive Statistics for Math, Reading, and CAA Scores

Writing Score (passing=8)	N	%
0	3	1.1
2	26	9.8
3	25	9.5
4	105	39.8
5	36	13.6
6	67	25.4
8	2	0.8

Figure 1(b): Distribution of Writing Scores

As of June 1988, 118 (43.5%) of the original 271 ESL students remained enrolled at Brooklyn College. The attrition rate was quite steady for the first four semesters, with approximately 12-15% of the original cohort of students leaving each term; in the fifth semester, the attrition rate slowed by half, with only 7% of the students leaving (see figure 2 below). Over the 6 semester period, 10 students who had not registered for at least one term subsequently resumed their studies at the college.

Semester	decrease in n of enrolled students	% of decrease from original cohort
F85	(271 entering students)	
S86	32	11.8%
F86	41	15.1%
S87	33	12.2%
F87	38	14.0%
S88	19	7.0%

Figure 2: Attrition rates from 9/85 to 6/88 (F=fall semester, S=spring semester)

Of the currently enrolled 118 students, 93 had passed the Writing Assessment Test (WAT), and 25 had still not done so; 41 of the no-longer-enrolled 153 students had also passed the WAT. Of the 93 currently enrolled students who had passed the WAT, 62 had also passed English 1 (freshman composition). Patterns of achievement on the WAT and in English 1 are further discussed later in this report.

"Academic Success" ratings (SCS), based on the criteria discussed on pp.4-5 above, were assigned according to the following scheme:

-SCS=0 - student no longer enrolled

-SCS=1 - student currently enrolled, does not meet criteria

-SCS=2 - student currently enrolled and meets criteria

The distribution of ratings is illustrated below (figure 3). It should be noted that when the academic transcripts of the 153 no-longer-enrolled students were examined, 17 showed clearly superior academic records; for this reason, these 17 "successful

drop-outs" were pulled out of the larger dropout group in subsequent statistical analyses.

SCS Rating		n	%
0	(not currently enrolled)	136	50.2
1	(enrolled - "unsuccessful")	53	19.6
2	(enrolled - "successful")	65	24.0
*	("pull out" group from 0)	17	6.3

Figure 3: Distribution of Academic Success Ratings (SCS)

Description of the Sample:(b) Questionnaire Respondents (n=62)

Sixty-two students responded to the questionnaire, 35 male and 27 female. The respondents came from 14 different language backgrounds, as shown in figure 4.

First Language	N	%
Spanish	21	34.4
Chinese	17	27.9
French/Creole	5	8.2
Arabic	3	4.9
Russian	2	3.3
Farsi	2	3.3
Vietnamese	2	3.3
Urdu	2	3.3
Khmer	2	3.3
Armenian	1	1.6
Burmese	1	1.6
Hebrew	1	1.6
Polish	1	1.6
Korean	1	1.6

Figure 4: First Language Backgrounds of Questionnaire Respondents

The average age upon arrival to the USA was 16.7 years, but ranged from 0 (4 respondents were born in the USA) to 35 years; overall, 49 of the 62 respondents had arrived in the USA after the age of twelve. The average length of residence in the USA was 7.2 years, but ranged from 2 to 20 years.

More than 3/4 of the respondents were currently enrolled students; 21 had SCS ratings of 1, and 27 had SCS ratings of 2. The 48 currently enrolled respondents represented 40.7% of the total remaining 1985 ESL cohort as of Spring 1988. Of the 14 respondents no longer enrolled, 4 fell into the "pull-out" category of student drop-outs with very good academic records. Only two respondents indicated that they were presently not in school, in response to a question concerning their use of English in school situations. Thus, as many as 12 of the Brooklyn ex-students may have been attending other schools.

Responses on the language-use portion of the questionnaire tended to be skewed towards the high end of the scale. That is, more than 3/4 of respondents reported using English "some of the time" or "all of the time" in all situations, with the exception of home. Responses on the "sense of belonging" questions tended to be more evenly distributed in general. A more detailed analysis of these items follows later in this report.

RESULTS: (A) THE 1985 ESL COHORT

Results concerning the entire 1985 cohort of 271 entering ESL students are examined in this section (a); results based on the 62 questionnaires which were returned are discussed next in section (b).

Patterns of Success and Failure in Freshman Composition

As mentioned in the introduction, one purpose of this study was to replicate Smoke's (1987) earlier findings concerning the relationship between success in freshman composition with both the number of times students repeat upper-level ESL writing courses and the number of semesters which elapse between completion of ESL writing and enrollment in freshman composition. Figure 5 below, a tree diagram, illustrates the performance of the 271 entering ESL students of Fall 1985, as of June 1988, in terms of performance on the WAT and in freshman composition. In addition, figure 6 presents the information concerning students' frequency of repetition of upper-level ESL writing courses, while figure 7 presents the information concerning the gap in semesters between students' completion of ESL writing and their enrollment in freshman composition classes.

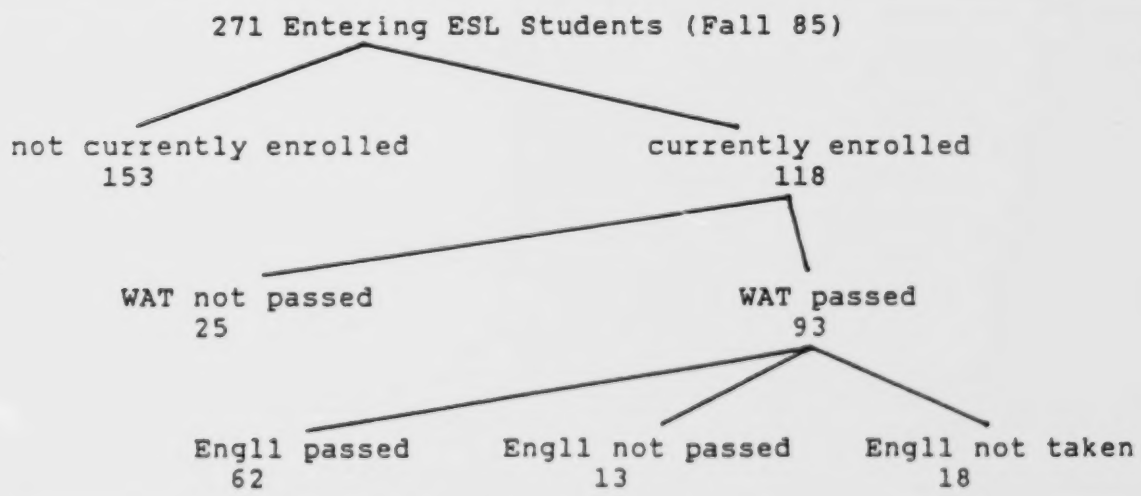

Figure 5: Performance on the WAT and in English 1 of Currently Enrolled ESL Students

# of times ESL writing courses were taken:	Students who did not pass the WAT (n=25)	Students who passed the WAT and: passed Engl1 (n=62)	did not pass Engl1 (n=13)	did not take Engl1 (n=18)
1	5	50	9	5
2	3	6	2	5
3	6	5	2	3
4	2	1	0	5
5	1	0	0	0

Figure 6: Frequency Distributions for Repetition of ESL Writing Courses by Different Categories of Students

Gap (in semesters) between completion of ESL writing and enrollment in Engl1	Students who passed Engl1 (n=62)	Students who did not pass Engl1 (n=13)	Students who did not take Engl1 (n=18)
0	51	9	*
1	9	4	3
2	1	0	1
3	0	0	0
4	1	0	3

Figure 7: Gap (in semesters) between Completion of ESL Writing and Enrollment in English 1

*11 students finished ESL writing in Spring 88 and did not yet have a chance to enroll in English 1

As can be seen in figures 6 and 7, of the 62 students who passed English 1, 50 only took their upper-level ESL writing courses once, and 51 enrolled in Engl1 immediately after completing ESL writing courses; however, 17 of the 31 students

who either did not pass Engl1 or did not take it yet had repeated ESL writing courses at least once, and 11 of them had waited one semester or more after completion of ESL before enrolling in Engl1. Because this study spanned only three years, compared to six for the Smoke study, it is difficult to make direct comparisons in terms of the repetition rates; thus, of the 118 students presently in attendance, only 9 had taken upper-level ESL writing courses more than three times, and one of these did actually pass English 1 in the end. Nevertheless, the findings of this study do seem consistent with the general finding by Smoke that both the number of semesters that elapse between completion of ESL and Engl1 and the number of times a student takes ESL writing courses seem related to success or failure in freshman composition to some degree.

Students' Entering Scores and Subsequent Academic Achievement

To investigate whether the ESL students' scores on the CAA (College Admissions Average - an index based on students' grades in academic courses in high school), and on the math, reading (CRAT) and writing (WAT) basic skills tests adequately predicted their subsequent academic achievement, the sample was divided into the three SCS rating categories (based on transcripts as of June 1988, with the 17 "academically successful dropouts" pulled out). To determine whether the three groups had shown significantly different entering scores in Fall 85, a series of oneway analyses of variance were calculated, using the SYSTAT statistical package (Wilkinson, 1986). It will be recalled that

an SCS rating of 0 denotes a student who is no longer enrolled, a rating of 1 represents a currently enrolled but "unsuccessful" student (according to the criteria pp. 4-5), and that a rating of 2 is used for students who are both still enrolled and "successful." The results are presented in figure 8 below.

	Mean Entering Scores: CAA	Math	CRAT	WAT
SCS = 0				
mean:	749	25.2	19.5	4.1
n:	104	132	132	132
SCS = 1				
mean:	726	25.9	19.0	4.1
n:	44	52	52	52
SCS = 2				
mean:	832	31.3	24.1	4.7
n:	56	64	64	64

	Analyses of Variance: Source	df	F	p
On: CAA				
	Between	2	16.28	.000
	Within	201		
On: Math				
	Between	2	12.49	.000
	Within	245		
On: CRAT				
	Between	2	8.29	.000
	Within	245		
On: WAT				
	Between	2	4.65	.01
	Within	245		

Figure 8: Analyses of Variance on Entering Scores of Students at Three Levels of Academic Success

As can be seen from these figures, the entering scores of ESL freshmen from the three categories of academic success are significantly different. The highest F value was for the CAA scores, followed by the math, reading and writing scores. The differences in the first three scores according to the level of academic success reached the .000 level of significance (two-tailed test, here and throughout this paper), and those on the WAT score attained significance at the .01 level. When the grade-point average of students was taken as the measure of academic success, the pearson correlation coefficient with the CAA score was .350 (p=.000), and .344 (p=.000) with the math score. It is interesting to note that the entering scores generally distinguished between students who received SCS ratings of 2 on the one hand, and students who received SCS ratings of 1 or 0 on the other hand. In other words, these scores seem to distinguish better between students who do well academically (SCS=1) and students who do less well (SCS=0 or 1), than between students who persist (SCS=1 or 2) and students who do not persist (SCS=0).

RESULTS: (B) THE QUESTIONNAIRE RESPONDENTS

As previously mentioned, there were 62 respondents to the questionnaire. Currently enrolled students were well represented (48 respondents or almost 41% of the 118 currently enrolled students), while only 14 ex-Brooklyn College students replied

(out of a total of 153). There were 35 males and 27 females; a chi-square test showed no significant difference in their SCS ratings. Similarly, F tests showed no significant effect upon SCS rating for years of residence in the US, or age upon arrival.

Reported Patterns of Language Use

With the exception of one item, responses to the language questions tended to be skewed toward the high end of the scale. Thus, twenty eight (45%) respondents indicated that they never used English at home, or that they did so very little. However, almost two thirds of those working reported that they used English all the time at work, and only two respondents indicated that they used English very little or not at all at school. Similarly, only 8 responded that they spoke English very little or not at all with friends, and only 10 had no good friends with whom they only spoke English. Finally, only 4 reported reading in English very little or not at all, and only one reported listening to the radio or watching TV in English very little. With respect to most language situations asked about, then, respondents seemed to indicate that they used English to a substantial degree; the only exception concerned language use at home, where almost half seemed to prefer their native tongue. Figure 9 below shows the distribution of responses on all seven language items (questions L1-L7, Appendix).

Item	Response 0	1	2	3	*
L1	16	12	29	5	
L2	0	2	16	33	11
L3	0	2	27	31	2
L4	1	7	36	18	
L5	10	4	25	23	
L6	0	4	22	36	
L7	0	1	14	47	

Figure 9: Response Frequencies for Items L1-L7 of the Questionnaire (see Appendix)

Interestingly, respondents who indicated that they used English more often seemed to do somewhat less well in terms of academic success. Thus, each one of the 7 items showed a negative spearman rho value when correlated with the SCS rating (values for rho ranged from -.006 to -.394). Only three items yielded spearman rho values which reached significance (at p=.01): those concerning English language use at home (rho=-.356), at school (rho=-.394), and with friends (rho=-.337). The item concerning English language use at work showed essentially no relationship with academic success (rho=-.097). An "English language-use index" derived by adding the scores (ranging from 0 for "never" to 3 for "all the time") on all 7 items showed a negative correlation with the SCS rating (rho=-.366, significant at p=.01)), and a second index constructed by adding the scores of the three "best" items mentioned above yielded rho= -.485 (p=.000).

The seemingly counter-intuitive negative correlations or lack of correlations between reported amount of English language usage and academic success ratings could be explained in terms of Cummins' (1979) distinction between "cognitive academic (second) language proficiency" (CALP) and "basic interpersonal communicative skills" (BICS). Thus the students who reported speaking more English may have been fluent BICS speakers, dominant in English for their daily linguistic lives, yet weak in their control of CALP. Indeed, an earlier SEEK funded research project found that a major challenge facing college ESL programs today concerns students who are fluent without being formally proficient (Kehl, personal communication).

To test for this hypothesis, a partial correlation between academic success ratings and the English-language use index based on all 7 language items was carried out with the effects of the entering math scores removed, using the 26 questionnaire respondents who had indicated that they never or rarely spoke English at home. The rationale was that those respondents who indicated using little or no English at home were less likely to be fluent BICS speakers; in addition, by removing the effects of the math score (the "best" predictor of subsequent student achievement of the entering scores), some control for the "cognitive-academic abilities" of the respondents would be achieved, thus allowing any potential relationship between English language use and academic success to emerge. This procedure yielded a partial r between the English language use index and the academic success rating of .412 significant at the

.05 level. Despite its evident limitations, this procedure did therefore lend some support to the notion that when the "(BICS) fluency without (CALP) proficiency" factor is controlled a relationship can be found between English language use in daily life and academic performance.

Reported Feelings Concerning "Sense of Belonging"

Overall, responses were more evenly distributed on these items than on the previous language items. Students generally reported relatively positive feelings about their college experience, despite some apparent reservations. Seventy percent or more of respondents agreed ('strongly" or "with reservations") that life for ESL students at Brooklyn College was "pretty good," that it was good that the college had high standards, that they generally worked hard in college, and that their overall college experience had made them feel "comfortable and positive." Over three quarters disagreed with the statement that classes were boring and that they often cut them. Opinion was evenly divided on whether various Brooklyn College requirements were obstacles and whether they could discuss personal matters with faculty and staff. Only 41% of respondents agreed that the college was an impersonal place where they spent little time outside of class, yet only half indicated that they liked to spend spare time on campus (some written-in comments explained that the particular respondents did not have any spare time to spend on campus). In a more negative vein, approximately 60% agreed that the faculty and staff sometimes "just kick you around the campus" and that

"there is a lot of prejudice" against ESL students. Figure 10 below shows the distribution of responses on the 11 "sense of belonging" items (questions Q1-Q11, Appendix).

Item	Response 1	2	3	4
Q1	5	10	30	16
Q2	12	18	21	10
Q3	15	15	21	10
Q4	4	8	19	30
Q5	10	15	17	18
Q6	1	13	22	25
Q7	22	16	15	8
Q8	20	16	16	8
Q9	0	14	24	23
Q10	5	24	12	19
Q11	4	14	29	14

Figure 10: Response Frequencies for Items Q1-Q11 of the Questionnaire (see Appendix)

Overall, the questions pertaining to the students' "sense of belonging" were positively related to academic success (rho ranged from -.030 to .333). Five items showed the most effect on the SCS rating: disagreement with the statements that the college's requirements were obstacles, that the college was an impersonal place, and that faculty and staff "kick (students) around," and agreement about working hard and having a positive experience in college were most related to academic success. An index of "sense of belonging" derived by adding all the scores on the 11 questions yielded a rho of .279 with SCS rating, and an

index based on the five "best" items yielded a rho of .431 (p=.01). It is interesting to note that the mean score on the index based on all 11 questions for the SCS=0 group was 26.56 (n=9), while that for the SCS=1 group was 29.48 (n=21) and that for the SCS=2 group was 31.81 (n=26). Thus, unlike the entering test scores (CAA, math, CRAT, WAT, as shown in figure 8), the "sense of belonging" index seemed to differentiate between all three categories of students, not just between academically successful students on the one hand, and unsuccessful ones on the other. An F test, however, failed to reach significance; given this and the size of the SCS=0 group, such a suggestion can however only be offered as speculation.

CONCLUSIONS

Not surprisingly, it appears that many factors play a role in the success of ESL college students, including cognitive-academic, linguistic and attitudinal ones. Students who come better prepared from high school (with higher CAA scores) do better, as do students who score higher on the entering basic skills tests (math in particular). Such a finding argues in support of programs such as the Prefreshman Summer Programs held at various CUNY campuses (Baum, 1988) which focus on providing underprepared students a head start before they even begin college.

Based on an examination of the performance of ESL students in ESL writing courses, on the WAT and in freshman composition (major hurdles in their academic careers), it seems that those

who do better tend not to be multiple repeaters and tend not to allow time to elapse in between passing the WAT and entering English 1. It is also clear that large numbers of students don't do well in the area of writing. This would argue for early intervention programs with at-risk repeaters, and for support services specifically in the writing area. Thus ways should be found to make writing centers (which are often devoted to the general student population) and writing tutors more effective for ESL students.

Given the steady attrition of students over the three years surveyed in this study, faculty, staff and peer counseling and mentoring as well as other support services would clearly all play important roles in seeking to both closely monitor student progress and encourage student retention. Student feelings of comfort and sense of belonging in college should also benefit from all the approaches mentioned above; indeed, the Prefreshman Summer Programs are in fact designed to promote both better performance and a more positive attitude. Similarly, mentor and peer programs, among others, also help improve student attitude.

The factor probably least susceptible to intervention concerns the linguistic patterns of the students since, as it turns out, those speakers who indicated that they used more English did less well in college. However, if the hypothesis concerning students who exhibit "fluency without proficiency" is confirmed, then it might prove useful to identify such students on the one hand, and students who are more proficient in their CALP skills on the other, in order to subject them to different

interventions. For example, the latter would probably profit from more plain English language practice (with peer tutors, etc) while the former might draw more use from instruction focused on the more formal, academic aspects of language (which is not to mean that such instruction need to be offered in a formal, traditional format itself).

Finally, this study suggests at least two further avenues of exploration. The first concerns the confirmation of the aforementioned "fluency without proficiency" issue, and the second is related to the discussion concerning the possible differences in the effects of "cognitive-academic" (as measured by the CAA and math scores) and "attitudinal" (as measured by the "sense of belonging" questions) factors; if the hypothesis that the former better predict student academic performance and the latter better predict student persistence, this distinction might need to be taken into account in devising intervention programs. It is hoped that further research in these areas will be encouraged and that the findings uncovered will help in the goal of improving the performance and retention of ESL students at Brooklyn College and throughout CUNY.

BIBLIOGRAPHY

Baum, J. Prefreshmen Summer Programs Get an A. PSC CUNY Clarion, 17 (8), 8, May 1988.

Beal, P. & L. Noel. What Works in Student Retention. The American College Testing Program, 1980.

Cope, R. & W. Hannah. Revolving College Doors. Wiley, 1975.

Cummins, J. Cognitive-Academic Language Proficiency, Linguistic Interdependence, the Optimal Age Question, and Some Other Matters. Working Papers on Bilinguallism, 19, 197-205, 1979.

Donovan, R. A. Persistence in Higher Education Among Low Income Black Youth: A Path Analysis. Unpublished Ph.D. dissertation. New York: Columbia University, 1983.

Ferguson, J., R. Wisner, R. Discenza. Developing a Framework for Student Retention: A Challenge to Traditional Enrollment Approaches. NAPA Journal, 24, 2-9, Fall 1986.

Herndon, S. Factors that Differentiate Between Persisters and Dropouts Among Recipients of Financial Aid. Journal of College Student Personnel, 26, 367-368, July 1984.

Lenning, O. Retention and Attrition; Evidence for Action and Research. National Center for Higher Education Management Systems; Boulder, Colorado, 1980.

McGuire, M. Identification of Students at Risk for Early Withdrawal: A Hierarchical Clustering Model. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, April 1986 (abstract).

Noel, L., R. Levitz, D. Saluri, & Associates. Increasing Student Retention. Jossey-Bass Publishers, 1985.

Smoke, T. What Happens Beyond the Developmental Writing ESL Courses (manuscript), 1987.

Tinto, V. Dropout from Higher Education: A Theoretical Synthesis of Recent Research. Review of Educational Research, 45 (1), 89-125, 1975.

Wilkinson, L. SYSTAT; The System for Statistics. Evanston, Illinois: SYSTAT Inc., 1986.

APPENDIX

NOTE: The responses to questions L1-L7 and Q1-Q11 have been numerically coded so as to correspond to Figures 9 (p. 19) and 10 (p. 22) in the text. Response codes to negatively worded Q items are reversed.

What is your first language? _____

Are you male __ or female __ ?

How old were you when you first came to the USA? _____

How many years have you lived in the USA? _____

(QUESTIONS L1-L7)

L1. When you are with your family, do you speak English?
3. all the time 2. some of the time
1. very little 0. never

L2. When you are at work, do you speak English?
3. all the time 2. some of the time
1. very little 0. never
*. I'm not wo-king now

L3. When you are at school, do you speak English?
3. all the time 2. some of the time
1. very little 0. never
*. I'm not attending school now

L4. When you are with your friends, do you speak English?
3. all the time 2. some of the time
1. very little 0. never

L5. Do you have any good friends with whom you only speak English?
3. many 2. a few
1. one 0. none

L6. When you read for pleasure (magazines, newspapers, books), do you read in English?
3. all the time 2. some of the time
1. very little 0. never

L7. When you watch TV or listen to the radio, is it in English?
3. all the time 2. some of the time
1. very little 0. never

(QUESTIONS Q1-Q11)

FOR ALL OF THE FOLLOWING STATEMENTS, INDICATE WHETHER YOU:

- STRONGLY AGREE
- AGREE WITH RESERVATIONS
- DISAGREE WITH RESERVATIONS
- STRONGLY DISAGREE

Q1. Life for ESL students at Brooklyn College is pretty good; it is easy to make friends with people from all over and ESL students don't generally have problems with other students, faculty or staff just because of their language or culture.

4 (strongly agree) 3 2 1 (strongly disagree)

Q2. Brooklyn College is not helping a lot of students in their academic goals or career plans by imposing so many requirements on them; the reading, writing and math tests, the ESL program, English 1, and Core courses all just become obstacles which students need to overcome.

1 (strongly agree) 2 3 4 (strongly disagree)

Q3. I have found that there are some professors or counselors or tutors with whom I can discuss not just questions related to academics, but also personal matters or just matters of general interest.

4 (strongly agree) 3 2 1 (strongly disagree)

Q4. I have generally not studied too hard at Brooklyn College because I have often felt that I wasn't learning anything new; many of my classes were boring and I often cut them, didn't do assignments or came late to class.

1 (strongly agree) 2 3 4 (strongly disagree)

Q5. I don't usually spend too much time on campus outside of class because I feel that it is a big and impersonal place where there are few individuals or groups for me to identify with.

1 (strongly agree) 2 3 4 (strongly disagree)

Q6. It is good that Brooklyn College has high academic standards because this pushes students to improve themselves; students who evaluate their experiences here will see that they have learned a lot and made good progress.

4 (strongly agree) 3 2 1 (strongly disagree)

Q7. There are not enough teachers, counselors or other staff who are really interested in hearing about your needs; they just tell you what they think is right, and sometimes they just kick you around the campus.

1 (strongly agree) 2 3 4 (strongly disagree)

Q8. Life for ESL students at Brooklyn College can be uncomfortable because there is a lot of prejudice; people think that ESL students are incapable of doing things that normal American students can do.

1 (strongly agree) 2 3 4 (strongly disagree)

Q9. I have generally worked hard at my studies and found most of my classes at Brooklyn College interesting; I didn't usually miss classes, come late or fail to do assignments and I feel that I have learned a lot.

4 (strongly agree) 3 2 1 (strongly disagree)

Q10. When I have spare time during the week, I like to spend it on campus, at the students center, at the library or sometimes I just like to sit around with friends any old place around the college.

4 (strongly agree) 3 2 1 (strongly disagree)

Q11. In conclusion, my overall college experience (both academic and social) has made me feel very comfortable and positive about Brooklyn College; I feel that this is a good college for me and for other students like me.

4 (strongly agree) 3 2 1 (strongly disagree)